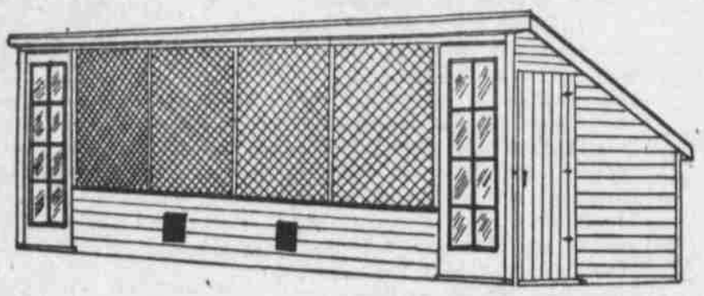
REDUCTION OF POULTRY YARD EXPENSES



Sanitary Houses are Necessary for the Laying Hens.

All kinds of grain, both whole and ground, are so high in price that it will pay us to study how to feed the hens as cheaply as possible and still secure good results.

Bran is a heavy expense, and the amount used can be greatly lessened by feeding cut clover, or cowpea hay. These contain the same elements as wheat bran and are very palatable for the hens when steamed.

Cut or break the hay into small pieces, pack into a tub or bucket and pour over it all the boiling water it will absorb, then cover closely and let stand thirty or forty minutes before feeding. In the winter when the hens cannot get green grass they relish this very much.

Sprouted grains are another cheap food. This was sold a few years ago as a poultry "secret" of feed at fifteen cents a bushel. Oats are generally used for this, although wheat, rye and other grains are as good.

The grain should be soaked for twenty-four hours, or even thirty-six hours, in warm water, then spread in shallow boxes and kept in a warm place. Keep moist by sprinkling two or three times a day with warm water. Feed when the sprouts are about two inches long.

The hens will eat grains and sprouts both and by the process of sprouting the amount of feed is greatly increased without increasing the cost.

Sunflower seeds, if raised in the odd corners where nothing else will grow to advantage, really cost us nothing. Hang the heads up where the hens will have to work a little to get them, or scatter the seeds around in the litter.

If these seeds are fed mixed with the other grains that are scattered in the litter, or as a change from the others, it will of course not be necessary to feed so much of the expensive grains.

The small potatoes and the potato-parings and trimmings from other vegetables used in the house can be boiled, salted and peppered, as for the table, and a little bran and cornmeal mixed with them, just enough to take up the surplus moisture, so that the mixture will not be sloppy. This makes a good, and also a very inexpensive mash feed. With it may be mixed the meat scraps.

Beef bones and scraps should be run through a bone cutter, or be chopped up by hand into small pieces, before giving to the hens.

Skim milk costs really nothing on the farms, and if the hens have all of it they will drink, they will not eat so much other food.

If these cheap feeds are handled right, it will leave only the last feed at night to be of the high-priced grains, and if well fed during the day on these other things, they will not eat so much of it then.

They should have a good feed of grain, mostly corn, for their supper, in order to keep them healthy and supply bodily heat during the cold weather.

By following these suggestions, the hens can be almost entirely kept on the waste products of the farm, and what is received for the eggs will be nearly all profit.

If properly housed and given plenty of clean water to drink, they will lay well on this bill of fare, and we can rejoice over a good supply of eggs when the prices are soaring.

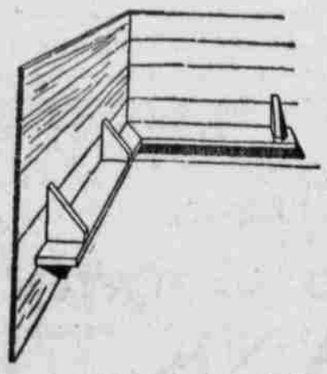
WEANING LITTLE PIGS

Much Depends on Number of Litters in a Year.

V-Shaped Troughs Placed on Cement Floors Are Most Satisfactory—Broken Pieces of Charcoal Are Relished by Animals.

(By J. J. FULLER.)

The length of time pigs should be allowed to suckle their dams depends largely on whether one or two litters

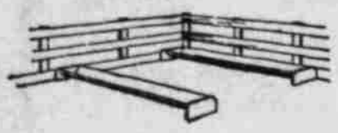


Corner of Farrowing Pen Equipped With Fender to Prevent Sow From Crushing Any of the Pigs When She Lies Down.

a year are to be raised. If but one litter, the pigs may nurse 12 or 13 weeks; where two litters are produced, the pigs cannot nurse longer than eight weeks. The sows should be separated from the pigs, only returning to them two or three times and then only long enough for the pigs to empty the udder.

After weaning time the sows are no longer given the rich, heavy ration supplied during the nursing period. Until their milk flow stops they should be put on grass with plenty of fresh water to drink and given but a limited allowance of dry feed.

After the pigs are weaned they should be continued on the ration which had been given them when running with the mothers. The ration can be most satisfactorily given in the form of a thick slop and fed in



Cement Feeding Floors Save Feed—The V-Shaped Troughs Are Desirable.

V-shaped troughs placed on a cement feeding floor. Shelled corn also may be fed on a clean spot on the floor. Either wood or corncob charcoal broken into pieces about the size of a hickory nut, is greatly relished by the early pigs while still confined in the spring before pasture grasses are available.

The farmer who has skim milk, clover or alfalfa, and grows corn will need to purchase but little feed for his swine. Middlings, oil meal and tankage are all valuable nitrogenous feeds and should be fed as supplements to corn. Of course too liberal feeding of corn in the early growing periods is injurious. Usually, for the first six to eight weeks after weaning, it is not best to make corn more than one-third of the grain ration. Skim milk is always a splendid feed for swine; and if available in sufficient quantities to form the greater part of the liquid in the ration, oil meal need not be fed. One hundred pounds of skim milk are sometimes considered equal in value for pig feeding to one-half a bushel of corn.

STORAGE OF SWEET POTATO

Ordinary Cave or Cyclone Cellar Makes Very Acceptable House—Crates Give Best Results.

(By N. O. BOOTH, Department of Horticulture, Oklahoma Agricultural College.)

Sweet potatoes should be kept in a building which is almost impenetrable to outside heat or cold. One of the best buildings we have found for this purpose is the ordinary cave or cyclone cellar. Such a cave, if fitted with double ventilators, makes a very acceptable sweet potato storage house.

The potatoes themselves had best be stored in crates, although racks give quite good results. As soon as they are taken from the field into the house, fire should be started in the stove, and the temperature run up to 100 to 110 degrees. This should be kept up from four to ten days until the potatoes are perfectly dry. The temperature should then be allowed to fall, and by opening the doors at night and closing them early in the morning the temperature should be kept down to between 45 and 50 degrees. In this manner sweet potatoes may be kept ordinarily quite satisfactorily.

GENERAL FARM NOTES

Push the pullets along to rapid maturity.

* * *

Never yell at a horse, it reflects upon yourself.

* * *

Swiss chard has proved worthy of a place in the garden.

* * *

Give the cream room for agitation, which insures quick churning.

* * *

In producing milk we get no profit until the cost of feed is covered.

* * *

Carrots should be so irrigated as to be kept in a good growing condition.

* * *

It is the fault of some man if a horse has bad manners, or a bad habit.

* * *

Don't keep the ram with the ewes. Give him light, clean, dry quarters by himself. Keep him thrifty by good care and sufficient feed.

* * *

Lying on cement is apt to bring lumps on the upper part of the legs of cattle. Either bed deep or plank the cement over.

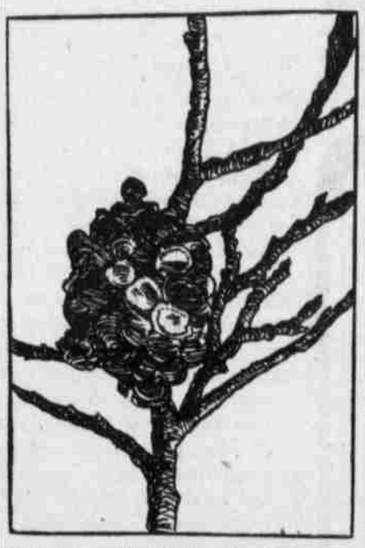
CEDAR RUST DISEASE

Trouble Is Very Abundant in Some Eastern Sections.

Orchards in Vicinity of Cedar Thickets Usually Suffer More Severely Than Those Which Are Situated Some Distance Away.

The cedar rust of apples is more or less widespread in the eastern and central portions of the United States. It is reported from New Hampshire to North Carolina on the Atlantic seaboard and westward as far as Iowa and Nebraska. The disease is not found except in regions where both apples and red cedar grow. The red cedar is very abundant in some parts of the eastern states, and in those sections there is a great deal more of the disease than in any other portion. The principal reason for this lies in the fact, that, along with the abudance of cedar trees, the large commercial apple orchards contain many varieties which are particularly susceptible to the disease. Orchards in the vicinity of cedar thickets have usually suffered more severely than those which are situated at some distance. The injury is more marked if the orchard is on the leeward side of the cedar thickets, where the spores of the disease may be continually borne in by prevailing winds, but all orchards of susceptible varieties of apples suffer more or less from the cedar rust. Two years ago, the financial loss to apple growers in the state of Virginia alone was estimated to be upwards of one-half million dollars, and this did not take into account the loss due to weakness of the trees and to impairing the vitality of the fruit buds for the following year, which would surely diminish each succeeding crop.

The cedar trees in the vicinity of apple orchards develop, during the winter and early spring, a large number of corky galls, which are commonly spoken of as cedar apples. These



A "Cedar Apple" in the Gelatinous Condition. It Is Usual to Find This Condition After a Warm Spring Rain. When These Masses Begin to Dry Out They Set Free Millions of Sporidia Capable of Infecting Apple Foliage.

galls contain the winter spores and slowly mature during the warm days of late winter and early spring. When the weather becomes warm enough and there is abundant moisture present, the cedar apples thrust out many gelatinous tendrils. So long as the gelatinous material is damp the spores do not escape to any extent, but, if bright, sunny days with brisk winds follow, the watery tendrils are dried and the spores are blown away from the cedar apples. The wind, of course, blows these spores where it lists, but only those which are carried to apples trees find conditions which are suited to their germination and future development.

How far these spores may be carried has never been definitely determined. Our observations and studies go to show, however, that if an orchard is one-half mile from the cedar, the amount of rust infection is usually not great enough to be a serious injury to the orchard. Any cedar trees which are cut after March first should be burned, since they retain the ability to cause infection for two months.

THE PERIODS OF GESTATION

Approximate Figures Given for Common Farm Animals—Considerable Variation Is Likely.

So many inquiries have been received relative to the period of gestation for common farm animals that we give the following brief statement of the approximate periods: Mares, 11 months; cow, 285 days; sheep, 5 months; goats, 5 months; sow, 4 months; dog, 63 days; cat, 50 days; rabbit, 30 days; squirrel, 28 days; rat, 28 days; turkey, incubation, 26 to 30 days; guinea-hen, 25 to 26 days; geese, 27 to 33 days; ducks, 24 to 26 days; hen, 19 to 24 days; canary birds, 13 to 14 days.

It must be remembered that the above figures are only approximate and that considerable variation will be experienced. For example, a record of 764 cows showed a shortest period of 220 days and a longest period of 313 days, with an average of 285 days.

A record of 25 sows showed extremes of 109 and 123 days while a record of another ten sows showed periods varying from 101 to 116 days.

The age, breed, condition, care and feed of animals affect the length of their period of gestation.

RAISE BIG TOULOUSE GEESE

Fowls Can Be Fed Almost Entirely on Grass—Not Subject to Disease Like Chickens.

We raise the large Toulouse geese and find them very profitable. They can be raised almost entirely on grass and are not subject to disease, like chickens. They commence to lay about the middle of February and will lay from twelve to fifteen eggs before wanting to set. They will lay three clutches of eggs if they are broken up when they want to set. One gander should be kept for every three or four geese and if they have access

Pair of Toulouse Geese.

to a pond of water in the spring, almost every egg will be fertile. The sooner the eggs are set after they are laid the better they will hatch. We set the eggs under hens giving seven eggs to each hen. If the weather is very dry we moisten the eggs with lukewarm water about the middle of the hatch and again a day or two before they are due to hatch. We nearly always have good luck hatching the eggs, says a writer in an exchange.

We give the goslings their first feed and water when they are forty-eight hours old. The water should be kept before them all the time in something that they can drink out of easily, but can't get into. We keep green feed such as lettuce, mustard or tender grass before them all the time, and give them bread moistened with milk, pot cheese or wet corn meal, three times a day until they are three weeks old. After this we give them a good feed of wet corn meal every night and morning and all the green feed they will eat until they are about seven weeks old. Then they are turned out in the pasture or in a rape patch and do not receive any more grain until fall. The goslings do not need a pond of water to swim in.

PREPARING FOR DEAR EGGS

Hatches From Which Early Pullets Are Derived That Are Largest Money Producers for Farmer.

If the farmer wishes to benefit by the high prices that eggs are certain to bring next fall and winter, he should begin to get ready for them say the poultry specialists in the department. The way to have eggs late in the year is to hatch pullets early. It is the early hatches from which the early pullets are derived that are the largest money-makers for the poultry producer. The early hatched cockerels can be marketed in almost any market in America when they attain a weight of three-fourths of a pound and a pound to a pound and a half each, which they should reach at about six to ten weeks of age, respectively, at a greater profit to the producer than at any other time of their lives. The early hatched pullets, if properly grown, should begin to lay in the fall at the time when eggs are scarce and high in price.

Pullets must be well matured before they will lay many eggs.

Pullets that start to lay in the fall before cold weather sets in will, as a rule, lay all winter.

It is the early hatched pullets that produce eggs in the fall and early winter, when prices are high.

February, March and April are the months to do your hatching in order to secure early hatched pullets.

Yearling and two-year-old hens do not lay many eggs in the fall, as they are molting at that time, and the feed they consume goes not only to keep up the energy and life of the birds, but also to put on or grow a new coat of feathers.

In properly matured pullets all surplus energy beyond that needed to meet the requirements of the body is available for the production of eggs.

Write the secretary of agriculture Washington, D. C., for bulletins on poultry management.

TESTING SEED BY INCUBATOR

Tray Made of Light Wood, Filled With Sand, Will Prove Efficacious—Keep Temperature Right.

While not in use for hatching, the incubator may be used for testing seed by making a false tray of light wood which is filled with sand. The seed should be placed in the sand, covered and kept moist. Keep the temperature up to, or above 85 degrees, and the seed will germinate in a short time.

Even when it is in use for hatching, seeds may be tested by placing them between damp cloths in a plate, setting the plate under the egg tray in what is known as the "chick nursery."

Plants thus germinated in sand may be transplanted to the hot bed, not only testing the seed for vitality, but utilizing those so tested.

GET EGGS IN WINTER

Nothing More Satisfying Than Thrifty Laying Hens.

Fowls Should Be Kept Comfortable and Fed Regularly—Keep Pure Water Before Them Always—Clean Quarters Essential.

(By M. CHANDLER.)

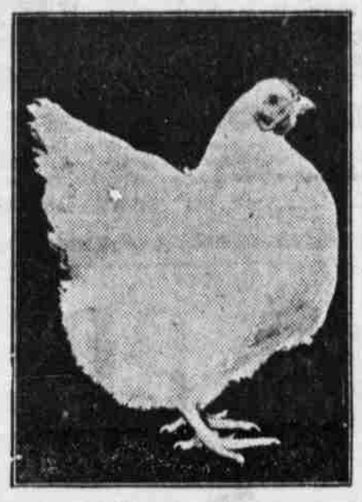
There is no profit in keeping poultry in winter without eggs, and nothing that brings more satisfaction, or better returns than good, thrifty, laying hens.

Some seem to have the knack of getting eggs in winter, while others are forever complaining. To be successful, one must use judgment. No fool can succeed in this line of business.

Laying hens should have the best of attention. They should be kept comfortable both night and day, and fed regularly on clean food, and pure water should be kept ever before them. Plenty of fresh air, sunshine, and clean quarters are absolutely necessary to the production of winter eggs.

Many make the mistake of having too many windows. The fowls gather in the sunshine during the day and get too warm, and consequently feel the night chill more. There should be at least one large window on the south side and one in the east side, but it should be so arranged that the fowls cannot get nearer to them than a distance of two feet at least. See to it that there are no cracks to admit the wind at night, but remember that a little outside air, during the day, when the fowls are moving about, is a good thing.

It is an excellent thing to have a gate or lath door that reaches from top to bottom of the doorway, and dur-



A Wyandotte Hen.

ing the day open the door and set up the lath door, and button it on with wooden buttons.

You will see how quickly the fowls will get to the fresh air and shake out their feathers. It is well to have a good supply of fresh litter with small grain thrown into it, at hand to keep them busy. There is little danger of their getting a chill, even on very cold days.

One of the most essential things I know of for success with winter egg-raising is to have everything perfectly dry. Dampness and thrift never dwell together. Never give water in troughs, for in this manner too much of it gets emptied. The best method for watering fowls that I have ever tried is stone milk crocks.

ENCOURAGE THE HIRED MAN

Harmony Is Best to Secure Best Results From Farm Laborer—Mean Boss Won't Do.

On our farm, where I worked we had 40 cows to milk morning and night. Two of us to do the work under a boss who was mean, fault-finding and dictatorial, and who always thought we were not accomplishing what we should and also always had on tap some work for us to attack before we were properly through with what we were then doing. He watched our every move, routed us out at four o'clock in the morning and saw to it that it was eight or nine o'clock at night before we were through. We were supplied with candles for retiring, which were usually short enough to burn out within half an hour after going to our sleeping quarters. Indisposition on the part of any workman was no excuse, pay being deducted for time spent on the sick list, and never, while I was there, was there any sympathy shown or any attempt made to help a man recover. Such a boss loses more in consequence through lack of interest and from carelessness in the performance of the work on the part of his help than is compensated by the extra work done for the satisfaction, to him, of having goaded his men as far as lay in his power. The men became listless and shiftless, feeling that no matter how hard or conscientiously they worked the boss was never satisfied. To obtain the best united effort of all the men there must be harmony or the disgruntled ones will soon turn away the man who is a good worker and who tries conscientiously to do his best.—A Hired Man.

Horse Here to Stay.

No matter how thick the autos come the good horse will never lose his place in the affections of men.

Be Careful With Teats.

Make sure that the teats are thoroughly dry after milking or you may have cracked teats to contend with.

CAUTION IN BUYING A HORSE

Take No Man's Word for Worth of Animal—Let Your Own Eye Be Your Sole Guaranty.

If you want to buy a horse, take no man's word for the animal. Your own eyes is your guaranty. Don't buy a horse in harness. Take everything off but the halter and have him led around. If he has any failing you should see it.

Let him walk by himself. If he walks right into anything you will know he has trouble with his eyes. No matter how clear and bright the latter may seem, the animal cannot see.

Back him, too. Some horses show their weaknesses and tricks in that

A Fine Family Horse, Gentle and Kind.

way, when they don't in any other. But smart as you may be, you'll get stuck sometimes.

A horse may look ever so nice and go at a great pace, and yet have fits, and there isn't a man who can foretell this. Something must happen to bring it out. Also, he may have a weak back or, if he is balky, off he goes for a mile or two, then all of a sudden stops on the road. After a rest he starts again, but soon stops for good, and nothing but a steam derrick will start him.

ESSENTIAL FOR LAYING HENS

It Is of Much Importance That Ample Supply of Grit and Lime Be Kept Before Fowls Always.

A poor hen never lays. She must have surplus fat to make the yolk. The old theory that hens do not lay because they are too fat is no longer believed, as it has been found out that as the yolk is composed of fat, it follows that she must have more fat than she needs to keep up her condition to produce eggs.

But unless you keep them supplied with something with which to grind up their food in order to make it into eggs, all your grain and labor are an absolute waste. They must have grit, good, sharp grit. Keep a box filled and always before them of cracked china, sand and oyster shells, of equal parts.

Lime, too, is quite as necessary, as the shell of an egg is composed of lime. A box of air-slaked lime should be kept always at hand. One should have a barrel or so of it on hand every fall, and use it freely about the hen house. Sprinkle it beneath their perches after cleaning out each morning, and always keep in the nest-boxes to absorb the dampness.

When the nights are very cold, it is a good plan to heat the grain very hot in the oven before feeding, and always remember to feed early enough so that they can see to get it.

A hot mash made of Indian meal and some kind of small grain, and wet up with hot water is good for breakfast now and then. Feed on long boards so that all can get their share. If the hens do not seem to be taking enough grit supply, put a few handfuls of it in the mash; a little red pepper, too, will warm them up.

Remember, the hens are early risers, and do not keep them waiting for their breakfast if you want them to fill the egg basket. They will repay all such courtesy.

PROPER CARE OF HEN'S NEST

Eggs Should Be Gathered Often to Prevent Chilling and Breakage—Keep Fowls Comfortable.

If the weather is cold the eggs should be gathered several times a day, so there will be no chance of their being chilled, as this would injure their keeping qualities.

If gathered often there is also less chance of their being broken and the hens learning to eat them. When the hens are confined in the house and a small yard, they are more likely to quarrel over the nests and scratch them out, and if the nest has several eggs in it they are then sure to be broken.

As soon as an egg is broken the hens will eat it, and after a few times they will have acquired the egg-eating habit. The only sure cure for this is the ax.

Keep the nest clean and supplied with plenty of soft straw or hay. Break up the straw with the hands before putting in the nest. The comfort of the hens should be considered on the nest as well as anywhere else.

Strong Hen Stands Molting.

A strong hen usually shows very little effects of molting. She does not lose as many feathers as a weak one and molting does not leave her weak or emaciated.

Big Mares Are Needed.

No matter how big the jack may be he cannot sire large draft mules from the ordinary run of mares common on the majority of farms.